

**Notice of Allowability**

Application No.

10/607,110

Examiner

Sheela C. Chawan

Applicant(s)

YOO ET AL.

Art Unit

2624

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/25/03.
2. ☒ The allowed claim(s) is/are 1-13.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 12/1/03, 1/13/06
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 8/30/06.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

***Examiner's Amendment***

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Ryan Carter on August 30, 2006, Reg # 52,410.

**IN THE CLAIMS:**

See the attached Amendment sheet page 2.

***DETAILED ACTION***

***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

3. The information disclosure statement (IDS) submitted on 12/1/03, 1/13/06 has been considered by the examiner.

***Drawings***

4. Drawings filed on 6/25/03 have been approved by Examiner.

***Reason For Allowance***

5. The following is an examiner's statement of reasons for allowance:

Claims 1-13 are allowed.

For Independent claims 1, 4 and 7, the prior art on record, fails to teach or fairly suggest, singly or in combination, a method for implementing a navigation key function in a mobile communication terminal using fingerprint-recognition, the mobile communication terminal including a fingerprint-recognition sensor divided into a plurality of image detection blocks, among other things comprising the steps of: including in the mobile communication terminal, a fingerprint –recognition sensor divided into a plurality of image detection blocks; recognizing a fingerprint over at least one of the plurality of image detection blocks; obtaining a directional characteristic corresponding to a direction indicated by the at least one of the plurality of image detection blocks that

has recognized the fingerprint; and determining a directional value based on the obtained directional characteristic to perform a corresponding directional process.

The closest prior art, Yacobi (US. 6,754,364 B1) discloses methods and systems for fingerprint digital data. Gordon et al., Pub N0: (US 2002/0135565A1) discloses optical pseudo trackball controls the operation of an appliance or machine. Ohba (US. 20020168961 A1) discloses mobile radio terminal and network commerce system using the same. Each of the above references either singularly or in combination, fail to anticipate or render the above limitation obvious.

6. Any comments considered necessary by applicant must be submitted on later than the payment of the issue fee and to avoid processing delays should preferably accompany the issue fee. Such submissions should be clearly labeled, comments on statement of reasons for allowance.

***Other prior art cited***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamazaki et al., (US. 2002/0052192 A1) discloses user identity authentication system and user identity authentication method and mobile telephonic device.

Kies (US. 6,970,580 B2) discloses system and method for maintaining a video image in a wireless communication device.

Kinsella (US. 6,947,580 B1) discloses pointing device with biometric sensor.

Dickinson et al., (US. 6,853,988 B1) discloses cryptographic server with provisions for interoperability between cryptographic systems.

Tuomela et al., (US 6792287 B1) discloses electronic apparatus.

Ritter (US. 6,657,538 B1) discloses method, system and devices for authenticating persons.


**Contact Information**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheila C Chowan whose telephone number is. 571-272-7446. The examiner can normally be reached on Monday - Thursday 7.30 - 6.00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sheila Chowan  
Patent Examiner  
Group Art Unit 2624  
August 14, 2006

  
SHEELA CHAWAN  
PRIMARY EXAMINER

**PROPOSAL**  
Attorney Docket: 678-1025 (P10351)

**PROPOSED AMENDMENT**

1. A method for implementing a navigation key function in a mobile communication terminal using fingerprint-recognition, ~~the mobile communication terminal including a fingerprint-recognition sensor divided into a plurality of image detection blocks~~, the method comprising the steps of:

including, in the mobile communication terminal, a fingerprint-recognition sensor divided into a plurality of image detection blocks;

recognizing a fingerprint over at least one of the plurality of image detection blocks;

obtaining a directional characteristic corresponding to a direction indicated by the at least one of the plurality of image detection blocks that has recognized the fingerprint; and

determining a directional value based on the obtained directional characteristic to perform a corresponding directional process.

4. A method for implementing a navigation key function in a mobile communication terminal based on a fingerprint-recognition, ~~the mobile communication terminal including a fingerprint-recognition sensor~~, the method comprising the steps of:

including, in the mobile communication terminal, a fingerprint-recognition sensor;

authenticating a user by processing an image of a fingerprint input by the user, when the operation of the fingerprint-recognition sensor is in a user authentication mode;

detecting subparts of the input fingerprint image when the operation of the fingerprint-recognition sensor is not in the user authentication mode but in a navigation key input mode;

after dividing the processed image into subparts of predetermined size, determining a direction toward which the fingerprint image is biased with respect to the entire fingerprint-detection region, based on the processed image for each direction; and

outputting a signal of the determined direction as a selected navigation direction and performing a control corresponding to the output signal.